

REMARKS

Introduction

This Amendment is in response to a Final Office Action dated April 10, 2003. Claims 16-24, 27 and 29 were in the application. Claim 19 has been deemed to be allowable if rewritten in independent form. Claims 16-18, 20-24, 27 and 29 have been rejected under 35 U.S.C. §102. By this Amendment, applicants have canceled claims 16, 17, 22 and 24 without prejudice. By this Amendment, applicants have also amended claims 18-21 and 23 and added new claims 30, 31 and 32. Accordingly, claims 18-21, 23, 27 and 29-32 are presently in the application. Claim 27 is independent.

This Amendment is being filed concurrently with a Request for Continued Examination (RCE) and a petition for extension of time. Applicants are also filing an Information Disclosure Statement (IDS) concurrently herewith.

Allowable Subject Matter

Applicants note with appreciation that Claim 19 was determined to be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Telephonic Interview

Applicants would like to take this opportunity to thank the examiner for the courtesies extended during a telephonic interview conducted on August 19, 2003. During the interview, applicants discussed distinguishing characteristics of the claims, as amended, with regard to the cited references. Specifically, applicants noted that neither of the cited references

disclose the claimed ink cartridge, with its claimed arrangement of ink tanks, wherein the ink tanks are all collectively integrally formed in the ink cartridge. While the Examiner conceded that it appeared that neither of the cited references disclosed the feature of all of the ink tanks being collectively integrally formed in the ink cartridge, the Examiner contended that once all of the separate, removable ink tanks of Yuji were placed in position in the cartridge, the ink tanks could be considered to be part of the ink cartridge. Applicants then pointed out however, that benefits were to be derived from the claimed feature of having the ink tanks collectively integrally formed in the ink cartridge, such as, for example, the fact that the entire cartridge, with all of its ink chambers and inks, could be easily put in position and removed as a one piece unit and in one step.

Applicants also discussed the limitation of all of the ink ports being aligned on one line, and the benefits of such a structure, as described in the subject specification.

Finally, applicants discussed a limitation of all of the ink ports being positioned at the bottom of the ink cartridge, and the benefits of such a positioning. The examiner agreed that it did not appear that either of the cited references disclosed such a positioning of the ink ports. Accordingly, the Examiner agreed to take these points into consideration upon the filing of a response.

Rejections Under 35 U.S.C. § 102

In the Office Action, claims 16-18, 20, 21, 24, 27 and 29 were rejected under 35 U.S.C. §102(b) based on European application No. 0 532 302 A2 to Toshimitsu et al.

Toshimitsu discloses an ink cartridge having eight recording heads. Toshimitsu does not disclose ink chambers being collectively integrally formed within the ink cartridge. In

fact, Toshimitsu appears to focus on other aspects of ink jet recording; Toshimitsu is silent as to the formation of the ink chambers in the ink cartridge (see e.g., Toshimitsu at Fig. 4 and Toshimitsu specification at page 4, lines 6-23.)

By the present Amendment, applicants have cancelled claims 16, 17, and 24 without prejudice. Accordingly, applicants respectfully submit that the rejections to those claims are moot and ask that the rejections to those claims be withdrawn.

Claim 27, as amended, of the present application is directed to an ink cartridge comprising, *inter alia*, a plurality of ink storage chambers storing ink of five different colors, all of the ink storage chambers being collectively integrally formed in the ink cartridge. Each ink storage chamber has an ink supply port, and all ink supply ports are aligned on one straight line.

Applicants respectfully submit that Toshimitsu does not disclose all of the features as claimed by claim 27, as amended, of the present application. For example, Toshimitsu does not disclose the ink storage chambers being collectively integrally formed in the ink cartridge. While the Office Action contends that each of the light colored ink tanks (9-1) of Toshimitsu are integrally formed with their corresponding dark colored counterparts (9-2), this arrangement does not satisfy the requirement of the ink storage chambers being collectively integrally formed in the ink cartridge. In stark contrast, instead of ink tanks of Toshimitsu being collectively integrally formed in the ink cartridge, Toshimitsu describes “four sets of color ink reservoirs.” Toshimitsu at page 4, ln. 18. Furthermore, Toshimitsu does not disclose all of the ink supply ports being aligned on one straight line. In fact, while the Office Action contends that Toshimitsu discloses a particular alignment of the ink supply ports, applicants do not find any teaching of the particular alignment of ink supply ports in Toshimitsu. For example, the only

figure of Toshimitsu that illustrates an ink cartridge is FIG. 4, and that figure does not show the ink supply ports, nor their particular alignment configuration.

Accordingly, applicants respectfully submit that Toshimitsu does not disclose all the features as recited by claim 27, as amended, of the present application. Accordingly, applicants respectfully request withdrawal of the rejection to claim 27, as amended, under 35 U.S.C. §102(b) based on Toshimitsu.

While Yuji was not cited the Office Action in a rejection of claim 27, applicants also further submit that Yuji does not disclose all of the features of claim 27, as amended, of the present application.

Yuji discloses a system wherein separate and discreet ink tanks 160 are disposed upon a ink cartridge apparatus 152 disposed on the printer (see Yuji at Figs. 15-17 and specifically, Fig. 16.) The separate and discreet ink tanks 160 of Yuji are separate and removable from the ink cartridge 152. The individual separate ink tanks 160 of Yuji, which may be positioned next to each other, each contain horizontal wall 161 separating upper and lower tanks which may contain dark and light inks of the same color (see Yuji at Fig. 16). In addition, the ink supply ports of Yuji are not all aligned on one line, nor are they positioned at the bottom of the cartridge.

Applicants respectfully submit that Yuji does not disclose all the features recited by Claim 27, as amended, of the present application. For example, claim 27 recites that the ink storage chambers are collectively integrally formed in the ink cartridge. In contrast, Yuji discloses a system wherein separate and discreet ink tanks 160 may be used in conjunction with an ink cartridge apparatus 152. Yuji does not disclose an ink cartridge wherein the ink storage

chambers are collectively integrally formed in the ink cartridge. While, as mentioned in the Office Action, Yuji discloses that each of the separate removable ink tanks includes both a top and a bottom chamber, and the top and bottom chambers of each of these separate removable ink tanks may be considered to be integral with the other (i.e., the top portion of each separate tank is integral with the respective bottom portion of each separate tank), all of the ink tanks are not collectively integrally formed in the ink cartridge because the ink tanks are separate and removable from the ink cartridge and from each other.

Accordingly, applicants respectfully submit that Yuji does not disclose all the features as recited by claim 27, as amended, of the present application.

Claims 18, 20, 21 and 29, as amended, depend from claim 27. Accordingly, applicants submit that claims 18, 20, 21 and 29 are allowable, at least for depending from allowable claim 27 for reasons discussed above with regard to the rejection of claim 27. Accordingly, applicants respectfully request that the rejections to claims 18, 20, 21 and 29 under 35 U.S.C. §102(b) based on Toshimitsu be withdrawn.

In the Office Action, claims 16, 18, 20, 22, 23 and 29 were rejected under 35 U.S.C. §102(a) based on European patent application No. 0 627 323 A2 to Yuji et al.

By the present Amendment, applicants have cancelled claims 16 and 22 without prejudice. Accordingly, applicants respectfully submit that the rejections to those claims are moot and ask that the rejections to those claims be withdrawn.

Claims 18, 20, 23 and 29, as amended, of the present application depend from claim 27. Accordingly, applicants submit that claims 18, 20, 23 and 29 are allowable, at least for depending from allowable claim 27 for reasons discussed above with regard to the rejection of

claim 27. Accordingly, applicants respectfully request withdrawal of the rejections to claims 18, 20, 23 and 29 under 35 U.S.C. §102(a) based on Yuji.

New Claims

By this Amendment, applicants have added new claims 30, 31 and 32. Claims 30 and 31 depend from claim 27, and recite additional features of the claimed ink cartridge. Claim 32 also depends from claim 27, and recites the additional feature of all of the ink supply ports being disposed at a bottom of the ink cartridge. As discussed above, neither of the cited references disclose the claimed ink cartridge in combination with such a positioning of the ink supply ports. Such a positioning of the ink supply ports at the bottom of the cartridge is beneficial in that the regulation of ink flow and pressure regulation may be facilitated by gravitational forces, as may not necessarily be the case with a cartridge having ink supply ports positioned apart from the bottom of the cartridge as is the case with, for example, Yuji.

Information Disclosure Statement

Applicants are submitting, currently herewith, a Supplemental Information Disclosure Statement (IDS) citing U.S. Patent No. 6,145,974 to Shinada et al. The examiner is invited to consider the cited reference.

CONCLUSION

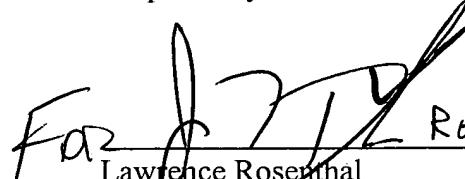
Accordingly, applicants respectfully submit that all of the claims presently in the application (i.e., 18-21, 23, 27 and 29-32) are in condition for allowance. If the examiner cannot

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issue an immediate Notice of Allowance, the Examiner is respectfully requested to contact the undersigned attorney to discuss outstanding issues.

Authority is hereby given to charge any additional needed fees to Deposit Account No. 19-4709.

Respectfully submitted,


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